

New book: *Foundations of Biogeography: Classic Papers with Commentaries* edited by Mark V. Lomolino, Dov F. Sax and James H. Brown. 2004. 1328 pages. ISBN 0-226-49236-2/0-226-49237-0. The University of Chicago Press. Hardback/paperback US\$135.00/\$45.00

Students and professionals in many fields of modern science do not, as previous generations did, acquire knowledge of original works that put forward most of the ideas in their fields. Historical development of ideas really shaped the foundations of the architecture of modern science. It is becoming increasingly difficult nowadays with the volume of new scientific publications increasing at a greater rate. It may be true that, for some fields of science, findings can be considered out-of-date if they are more than a half a year old and students are encouraged to follow only the current publications. However, fields of ecology, evolution and biogeography are certainly not among those. Many of the ideas that are brought up in those fields are often recurring themes from works by earlier researchers (industrial melanism, theory of island biogeography, food web diagram (Fisher, 2005), to name a few). It is not only rewarding to read the classic or foundational works by great thinkers because seemingly new ideas may be found when one explores, but I also find it very satisfying to learn how certain ideas were developed and how those pioneering workers thought and wrote, and where some of the recurring topics really rooted from. Although it is a research subject for history of science in its own right, I believe that it is also scientists' obligation to know their field of study and learn where each idea was originated. Pleading ignorance should not be an excuse.

Biogeography has strong ties with evolution, as it is a science about geographic distribution of organisms due to evolution and plate tectonics (Cox & Moore, 2005). Moreover, one of the most fundamental questions in ecology is related to what biogeography studies: what determines distribution of a certain organism and why one can find it here, but not there? Therefore, it is difficult to draw a distinct line between these three fields of science because they are interconnected, just as distribution patterns should be explained not only by historic factors (evolution, geology etc.), but also by ecological interactions. Thus students in either field should learn from and read works in the other fields. Exactly for these reasons, books like the

Foundations series published by the University of Chicago Press are very important.

Foundations of Biogeography is the third in the series (the other two being *Foundations of Ecology* (Real & Brown, 1991) and *Foundations of Animal Behavior* (Houck & Drickamer, 1996)). *Foundations of Biogeography* (Lomolino, Sax & Brown, 2004) is a voluminous book that was put together by a 19-member editorial board of international scientists. It includes reprints of 72 original works published from 1761 through 1982, tracing biogeography's maturation from its historical foundations through its empirical and theoretical development. These foundational works were divided among eight parts, each with an essay introducing the part: (1) Early classics; (2) Earth history, vicariance and dispersal; (3) Species ranges; (4) Revolutions in historical biogeography; (5) Diversification; (6) The importance of islands; (7) Assembly rules; and (8) Gradients in species diversity: why are there so many species in the tropics? The authors included are as early as Linnaeus, Buffon, de Candolle, Humboldt and Darwin and as late as MacArthur, Wilson, Simberloff and Janzen. Therefore, the book will provide a satisfying read for anyone interested; beginners and professionals alike.

It is an overwhelming task to assemble anything from an expansive list of publications and one has to be sympathetic of all the effort by the editorial board to compile this book. Although people inevitably have different perceptions and takes on what should be considered as the foundation, most of the seminal works included in this volume would probably be retained regardless of who compiled the book. There is also an understandable avoidance of repeating works that were already included in the *Foundations of Ecology*, even though many included in this volume are also authored by scientists whose works were included previously. This again highlights the fact how thin the line is between ecology, evolution and biogeography.

Biogeography has come a long way since the ponderings of Linnaeus, Humboldt, and Wallace to be recognized as a distinct discipline, as James

Brown pointed out in his contribution. The fact that not many people could call themselves biogeographers during all this time is surprising for one of the earliest fields in biology. Nowadays, biogeographers conduct their research to understand general patterns of distribution of organisms, fully armed with GIS technology, databases and high levels of computing power for analyses. It is generally acknowledged that biogeography is an important field to understand how communities are assembled and what we should do to conserve biodiversity more efficiently.

I have no doubt that this book will be as successful as the previous two in the series. With this Foundations series being so popular, I am also hoping to see a Foundations of Evolution volume in near future. This impressive volume, the *Foundations of Biogeography*, should be strongly recommended for evolutionists, ecologists, science historians, and of course biogeographers.

References

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